REMARKS

Claims 1-2, 4-7, 12-13, 24-26 and 28-29 were rejected as being obvious over Kley in view of Aksay. This rejection is respectfully traversed.

Claims 1 and 24 have been amended to clarify that the method of claim 1 and the molecular identification system of claim 24 relate to the identification of a *biomolecule* by molecular combining wherein the molecular combining comprises attachment of the biomolecule to a surface and alignment of the biomolecule.

Applicants respectfully submit that *none* of the cited references relate to molecular combining *of a biomolecule* wherein the molecular combining comprises attachment of the biomolecule to a surface and alignment of the biomolecule.

The Examiner acknowledges that "Kley does not explicitly teach aligning an object in a parallel manner on a surface" and therefore relies on Aksay for teaching a method having "aligning an object (surfactant tubules) in a parallel manner on a surface (FIG. 9 and page 5, [0060])." See page 3, lines 14-16, of the Action. However, as the Examiner recognizes that the word "biomolecule" does not read on the "surfactant tubules" of Aksay, the Examiner then states that "Kley shows the method wherein the object is a biomolecule (semiconductor material) (column 13, lines 65-67 though column 14, line 1)." See page 4, lines 12-13, of the Action.

In column 13, lines 65-67 though column 14, line 1, Kley states:

> In bulk materials, this measure reflects local changes such as crystal dislocations, etc . . . . In patterned materials, such as semiconductors, this measure provides subsurface structural information.

Kley refers to patterned material such as semiconductors, but *nowhere* does Kley even mention a "biomolecule."

While the Examiner can broadly define the words of the claim during examination (see MPEP 2111.01), "the words of the claim [still] *must* be given their *plain meaning*." MPEP

2111.01(I); emphasis added. MPEP 2111.01(III) clarifies that "'PLAIN MEANING' REFERS TO THE ORDINARY AND CUSTOMARY MEANING GIVEN TO THE TERM BY THOSE OF ORDINARY SKILL IN THE ART." [Bold in original.]

Thus, the question at issue is whether the ordinary and customary meaning of "biomolecule" by those of ordinary skill in the art is "semiconductor." The answer to this question is an unequivocal "no."

The term "biomolecule" is explained in the specification in paragraphs [0020] to [0033]. Nowhere in the specification is it stated that a "biomolecule" could be a "semiconductor."

Also, the undersigned searched GOOGLE for the definitions of the term "semiconductor" to check if a "semiconductor" means "biomolecule" and found ***no*** definition of the term "semiconductor" to mean "biomolecule."[1] In short, the ordinary and customary meaning of

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[1] **Definitions of Semiconductor on the Web:**

An element, such as silicon, that is intermediate in electrical conductivity between conductors and insulators, through which conduction takes place by means of holes and electrons.
www.crucial.com/library/glossary.asp

A material that is neither a good conductor of electricity (like copper) nor a good insulator (like rubber). The most common semiconductor materials are silicon and germanium. These materials are then doped to create an excess or lack of electrons. Computer chips, both for CPU and memory, are composed of semiconductor materials. Semiconductors make it possible to miniaturize electronic components, such as transistors. ...
www.5starsupport.com/glossary/s.htm

part-time employee on a streetcar
www.besse.at/sms/glossary.html

(Also "microchip," "chip," "integrated circuit" or "IC"). Components that provide the memory, logic and virtually all other intelligence functions in today's electronic systems.
www.synopsys.com/news/pr_kit/eda_glossary.html

A material whose electrical resistance can be switched between insulating and conducting. Silicon is the most commonly used semiconductor material and the basic material for building most chips.
www.mosaid.com/corporate/about/glossary.php

Generic name for devices like transistors and integrated circuits that can control the flow of electrical signals. Silicon is the basic material of most semiconductors.
media.corporate-ir.net/media_files/nsd/xlnx/annual96/glossary.htm

A material such as silicon whose conductivity is between that of a conductor and an insulator. Its conductivity can be modulated by adding impurities such as boron or phosphorus. Shunts: (or, to shunt) Means to divert electrical current with conducting lines, usually made of polysilicon. back to top
www.genus.com/glossary.html

A material whose resistivity is between that of insulators and conductors. The resistivity is often changed by light, heat, an electric field, or magnetic field. Current flow is often achieved by transfer of positive holes as well as by movements of electrons. Examples include germanium, lead sulfide, lead telluride, selenium, silicon, and silicon carbide. Used in diodes, photocells, thermistors, and transistors.
www.electronicconcepts.ie/news_updates.asp

An element or compound whose electrical properties are midway between a conductor and insulator. A substance with relatively high resistance and corresponding low conductivity.
lanoswww.epfl.ch/studinfo/courses/cours_supra/notes/glossary.htm

A material whose ability to carry on an electric current falls between those of metals and nonmetals.
xenon.che.ilstu.edu/genchemhelphomepage/glossary/s.html

a material that, in terms of its physical properties, is between a conductor and an insulator. The commonest semiconducting material, silicon, was used in the transistor, the world's first electronic switch, and is still the basis of modern microprocessors and information technology.
www.oup.com/uk/booksites/content/0199253978/student/glossary/glossary.htm

A class of matter that sits between conductors (like copper) and insulators (like plastic) in the way it handles electron flows. Electronic currents within semiconductor crystals are controlled by external voltages to produce pulses and store charges. The basis of all of today's standard digital technology.
www.techwriter.co.nz/nerd-ns.html

an element with an electrical resistivity in the range between an insulator and a conductor. A material that can conduct or block the flow of electric current depending on processing and applied electrical biases.
www.icknowledge.com/glossary/s.html

A class of materials, such as silicon and germanium, whose electrical properties lie between those of conductors (such as copper and aluminum) and insulators (such as glass and rubber). A semiconductor substance can conduct electricity under some conditions but not others, making it a good medium for the control of electrical current. ...
www.x-emi.com/tech_terms.html

Any of various solid crystalline substances, such as germanium or silicon, having electrical conductivity greater than insulators but less than good conductors, and used especially as a base material for computer chips and other electronic devices.
nue.clt.binghamton.edu/intro1_6.html

A material that is neither a good electrical conductor nor a good electric insulator.
www.candc.co.uk/se/glossary.htm

Any class of solids having higher resistivity than a conductor, but lower resistivity than an insulator, and are the basis for all integrated circuits.
www.atlab.com/LIMS/glossaryp-t.html

A substance that conducts electricity poorly at room temperature, but has increasing conductivity at higher temperatures. Metalloids are usually good semiconductors.

"biomolecule" by those of ordinary skill in the art is *NOT* "semiconductor" as interpreted by the Examiner in making the obviousness rejection of claims 1-2, 4-7, 12-13, 24-26 and 28-29 were rejected as being obvious over Kley in view of Aksay. Thus, Kley in view of Aksay does not teach or suggest this invention *as a whole*.

Claims 8-11 were rejected as being obvious over Kley in view of Aksay, as applied to claim 1, further in view of Grand. This rejection is respectfully traversed.

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misterguch.brinkster.net/vocabulary.html

A special class of materials that can exhibit both conducting and insulating properties.
www.eppic-faraday.com/glossary.html

A substance that will conduct electricity, but does not conduct as well as a metal (eg silicon, carbon). The amount of electricity flowing through a semiconductor can be precisely controlled.
www.abheritage.ca/telephone/glossary.html

Substance through which current flows moderately well.
highered.mcgraw-hill.com/sites/0072480823/student_view0/glossary.html

A material that allows electrical current to flow under certain circumstances. It is used to make transistors and other "solid state" electronic components. Silicon is one of the most frequently used semiconductor materials.
www.ucsf.edu/y2k/toolkit/gloss.html

This is a material, such as Silicon, possessing resistive properties somewhere in between a conductor and insulator, used to effectively control current flow.
www.satellite-tv-hq.com/telecom-glossary-s.htm

An element which is neither a good conductor or a good insulator, but rather lies somewhere between the two. Characterized by a valence shell containing four electrons. Silicon, germanium and carbon are the semiconductors most frequently used in electronics.
www.sciencelobby.com/dictionary/s.html

An electronic conductor with a resistance that decreases as the temperature is raised. In an n-type semiconductor, the current is carried by electrons in a largely empty band; in a p-type semiconductor, the conduction is a result of electrons missing from otherwise filled bands.
www.tu-cottbus.de/BTU/Fak1/AnorgCh/1718Keyterms.htm

a substance as germanium or silicon whose electrical conductivity is intermediate between that of a metal and an insulator; its conductivity increases with temperature and in the presence of impurities
semiconductor device: a conductor made with semiconducting material
wordnet.princeton.edu/perl/webwn

A semiconductor is a material with an electrical conductance that is intermediate to those of an insulator and a conductor.
en.wikipedia.org/wiki/Semiconductor

Claims 8-11 depend directly or indirectly from claim 1. Grand does not fill the gaps in Kley and Aksay. Thus, claims 8-11 should also be allowable as claims 1-2, 4-7, 12-13, 24-26 and 28-29 should now be allowable.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing Docket No. 070702008320.

Dated: December 12, 2006

Respectfully submitted,

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